Danish - Indian Waste Water Treatment Demo Project
Partnerships

• Danish Water Forum – knowledge sharing and joint activities

• Facilitating water and clean-tech partnerships for emerging markets – waste water treatment in India

• Are partnerships the right way to go?

• From products to solutions

• And what about the markets?
Background

- February 2009: India-Danish Water Days
- Danish Minister of Environment visits India in Feb 2009
- Danish Prime Minister signs agreement with India on knowledge sharing and exchange of environment-friendly technology
- Business contacts between Indian and Danish companies
- Site-visit to wastewater treatment plant in Mumbai – room for improvement by introducing Danish technologies: water quality and energy efficiency – 6 companies to form a partnership
6 companies covering the whole process

- COWI, largest Danish consulting company
- Danfoss, world-leading company in automation, drives and other technologies
- DHI, environmental research and consulting company
- Grundfos, world-leading supplier of low-energy- high-efficiency pumps
- Siemens, world-leading supplier of technology and solutions
- Water Center South, the third-largest water supply company in Denmark with international links and experiences
The ”backing-group”

Danish Environmental Protection Agency under the Ministry of Environment.

Danish Water Forum, a knowledge-sharing network, promoting Danish technology export, cross-cutting research.

The Royal Danish Embassy, Delhi, The Trade Council
The aim of the Demo Project

- Cooperation on plant rehabilitation
- Energy optimization
- Improved treatment processes
- Higher quality on the discharge water
Effective uptake 20%
In other words! Save up to 50% of the energy

Effective uptake max 50%
Opportunities

• Improving technical solutions and optimising efficiency of the plant: Changing pumps, and aeration systems (blowers), fitting control systems and sensors, collecting data and using these to control aeration, pumping, data management system

• Training staff in new operation skills
• Better access to financial options
• Providing the whole solution in a package, not individual products
• The plant can function as a demo-site for India – and for Danish technologies – and for cooperation among companies
Challenges

• Bureaucracy
• Low price for energy
• Financing models
• Low awareness about water and environment, the DK-India agreement did help along with the later agreement on upgrading the plant

• Is the partnership model relevant and can it be transferred to other countries and settings?
Other projects

- Innovative Green System solutions – based on experiences from the India-partnership – transfer to other countries on:
- Groundwater, China (key Danish competence)
- Reduction of Non-Revenue-Water, Indonesia or Vietnam
- Local Rainwater management
- Sludge partnership in India
Usefulness of partnership model?

- Danish water sector characterised by SME’s – most are too small for global markets (half below 20 emp. Only 13% more than 250
- Focus on solutions and not products and individual competencies
- Partnerships cover the whole range from product over consulting to training.
- Partnerships are needed to maintain R&D and cooperation with research and knowledge institutions
- Companies interested in broad partnerships: other companies, universities and applied research institutes (53% high or very high degree, 34% some, only 7 and 6% little or very little), but primarily with Danish partners.
Is there a market for Danish water technology?

- Global water market 7-800 bill€
- 1.7 bill. facing water stress today – 5 bill. in 2025
- In Denmark water business difficult to calculate, no official branch, but estimate says 200 companies 35,000 employed
- High export potential: 2001 – 2006 growth 9%
- High level of R&D, 13% of companies spend more than 25% of turn-over.
- High export share of production, around 50%
Is there a market for Danish water technology 2?

- But tendency to focus on neighboring markets – where we are now: Nordic, West Europe, USA, East Europe (not Russia), less on emerging economies like Asia, China, Russia, South America.
- And in the future, same pattern, i.e. export to Canada is expected to be like export to Russia or China. There is a comfort zone.
- Need for a push to go to emerging economies with the whole value chain
In conclusion

• Danish water sector has high export and the potential to improve this.
• Many SME’s are in this category
• They are focussing on neighboring and look-alike markets, need for a push towards growth markets.
• And they need to be able to demonstrate the value of Danish knowledge on global markets
• Partnerships can contribute to overcoming size and innovation needs and demonstrate knowledge, but it demands support to establish model, business case and up-start of partnership.
• Partnerships can support steps into new markets, partners can learn from each others network.